



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Natural Resources

DIVISION OF OIL AND GAS

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April 12, 2023

PUID: MLUP-23-002-SE021323A

Ashley Rogers
Permitting Coordinator
SAExploration Seismic Services (US), LLC
8240 Sandlewood Place, Suite 201
Anchorage, Alaska 99507

RE: MLUPCI 23-002, SAExploration Seismic Services, LLC, Whiskey Gulch 2D Test Line, Geophysical Exploration, Land Use Permit Approval

Dear Ms. Rogers:

The Department of Natural Resources (DNR), Division of Oil and Gas (Division) approves the SAExploration Seismic Services, LLC (SAE) Whiskey Gulch 2D Test Line Seismic Survey Miscellaneous Land Use Permit (MLUP) application, dated February 14, 2023, to conduct seismic exploration on State of Alaska (SOA) lands and waters in the Cook Inlet Region of Alaska. The enclosed permit, MLUPCI 23-002, authorizes SAE to conduct a land and marine seismic survey on State of Alaska land and waters within the Kenai Peninsula Borough (KPB) in the Whiskey Gulch area, near Anchor Point, subject to the conditions of the permit. This project includes an approximately 5-mile seismic test line across multiple tracts of SOA, KPB, Native, University, and privately owned surface land.

This permit is effective April 12, 2023, to May 31, 2023.

Issuance of a permit under 11 AAC 96 is not a disposal of an interest in land and does not grant a preference right to a lease or other disposal. The permit is revocable for cause for violation of a permit stipulation of this chapter and is revocable at will if the DNR determines that the revocation is in the state's interest. The proposed activities are for a discrete and limited duration with limited, temporary impact to the land, and are not part of a larger project or investment by the permittee that might weigh against revoking the permit. Therefore, the permit is both legally and functionally revocable. Each permit issued is subject to any stipulations the DNR determines necessary to assure compliance with this chapter, to minimize conflicts with other uses, to minimize environmental impacts, or otherwise to be in the interests of the state. Public notice of any miscellaneous land use application is discretionary under 11 AAC 96.030(c). The Director of the Division of Oil and Gas (Director) has the right at any time to amend or modify any provisions of this permit or revoke this permit.

Project Description: Proposed Activity, Associated Structures, Type of Equipment:

The project equipment includes the following: a recorder, boom boxes, radios, GPS handhelds, nodes (land specific), nodes (water specific), line viewers, auxiliary equipment, workstations, base stations, plotter, Trimble packs, Clearwave charges, OSX charges, loading poles, magazines, augers, tracked drills, drill accessories, SAE crew, wilderness guides, light tracked vehicles, a bow picker, a Uni Vibrator vehicle on rubber tires, and a Peak Particle Velocity monitor. This project will occur onshore, offshore, and in tidelands. A crew of SAE representatives will operate the autonomous nodal seismic recording equipment in all three environments. In the onshore environment, Clearwave sources will be drilled and placed at 55-foot intervals and conventional sources will be placed at 350-foot intervals. The nodes will then be placed approximately 27.5 feet apart. Within the tidal and offshore environments, the nodes will be placed at 55-foot intervals. Additionally, near the bluff and water wells a 13,000-pound Uni Vibrator Vehicle will be utilized to generate a frequency between five and 96 hertz for the duration of 16 to 24 seconds at each source. No sources will be placed on the west side of the Sterling Highway.

Project Area Legal Description:

Meridian: Seward

| | | |
|---------------|------------|----------------------------------|
| Township: 04S | Range: 15W | Sections: 21, 22, 23, 24, and 25 |
| Township: 04S | Range: 14W | Sections: 28, 29, and 30 |

Scope of Decision:**This decision is reviewing the following activities for Division approval:**

This decision authorizes the use of state-owned land parcels to gather data in the exact manner described in the project description. Due to the de minimis ground disturbance and environmental impacts the Division has no objection to the execution of this project.

This decision is not reviewing the following activities for Division approval:

This permit does not approve entry on private land. This permit does not constitute the approval required for surface entry on non-state land without an agreement with the surface owner.

Land Status:

The proposed SAE Whiskey Gulch 2D Seismic program is located on SOA, KPB, Native, University, and privately owned surface land and waters within the KPB (Appendix A).

Identified Interests within or near the Project Area:

Hilcorp Alaska, LLC Oil and Gas Lease ADLs: 392496, 392666, and 393959

Water ADLs: 207079, 212825, 44477, and 44488

Water LAS's: 26653, 8804, 25356, 3396, 23038, 24233, 24850, 25355, 26411, 33981, 33982, 9222, 21965, 33928, 33978, 33982, 607, 33978, 33981, and 33982

TWUA: A2020-116

Nonstate Land Reclamation LAS's: 26275, 26279, 26281, 26282, and 26283

Public Utility Easement ADL: 34494

Additional Subsurface ADL: 391210

Agency Review:

The Division provided an agency review and comment opportunity for the activities considered for authorization under this decision. The following government entities were notified on February 16, 2023, for comment on the application: Alaska Department of Fish and Game (ADFG), Alaska Department of Environmental Conservation (ADEC), DNR: Division of Mining Land and Water (DMLW), Kenai Peninsula Borough (KPB), United States Army Corps of Engineers (USACE), and United States Fish and Wildlife Service (USFWS). The comment deadline was 4:30 pm Alaska time on March 2, 2023. ADFG provided a comment; no other comments were received. See Appendix B for the agency comment and review.

Public Review:

Public notice of the Plan and opportunity to comment was provided on the State of Alaska's online public notice website and the Division's website on March 2, 2023. Faxes of the public notice were sent to the Homer Post Office, Clam Gulch Post Office, and Anchor Point Post Office. Additionally, public notice was published in the Anchorage Daily News on March 7, 2023, and March 21, 2023, and in the Homer News on March 9, 2023, and March 23, 2023. The deadline for comment was March 31, 2023, at 4:30pm Alaska time. Multiple comments were submitted. See Appendix B for the public comments and responses.

Performance Guarantee:

The permittee has provided the Division with a performance guarantee (Reference No. B011897) under 11 AAC 96.60 in the total amount of \$100,000.

Insurance:

The certificate of insurance has been furnished to DNR and lists the State of Alaska, Department of Natural Resources as an additional named insured on the policy. The policy is issued by an insurer licensed to transact the business of insurance under AS 21.

Application Approved:

Should any unforeseen issues arise, the Division has the authority to amend or revoke this permit. As detailed in this permit, the Division shall be notified if, during the conduct of activities, a surface use conflict occurs. All activities conducted under this permit are subject to inspection by the Division, and if damage occurs, appropriate interest holders will be engaged, and corrective action will be prescribed. The Division may impose additional provisions as necessary to minimize impacts and conflicts.

The Division considered all facts material to this application including the permit provisions contained in this authorization per 11 AAC 96.040(b). The Division has determined that this permit, as conditioned by the attached provisions for this non-permanent activity, is in the state's interest. Stipulations in this permit are necessary to protect the state's interest and the public interest.

Sincerely,

DocuSigned by:
Graham Smith
2846043C8317495...

Graham Smith
Petroleum Land Manager
Division of Oil and Gas

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of “issuance” of this decision, as defined in 11 AAC 02.040(c) and (d) and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or sent by electronic mail to dnr.appeals@alaska.gov. Under 11 AAC 02.030, appeals and requests for reconsideration filed under 11 AAC 02 must be accompanied by the fee established in 11 AAC 05.160(d)(1)(F), which has been set at \$200 under the provisions of 11 AAC 05.160 (a) and (b). This decision takes effect immediately. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department on the 31st calendar day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Appendices:

- A: Map
- B: Agency Comment
- C: Public Comment
- D: Stipulations

ecc: DOG: James Hyun, Ashley Ethridge, Alex Zinck, Hayley Beitel, Molly Fenton, Rebecca Marks, Kirk Morgan, DOG Units, and SPCO Records
DMLW: SAIL, Clifford Larson, and Henry Brooks
ADFG: Ronald Benkert
ADEC: DEC Agency Reviews
Borough: Kenai
Other: USACE; USFWS, and public commenters

Appendix B: Agency Comment

ADFG Comment:

“Thanks for the opportunity to comment on ADNR-DOG’s Geophysical Exploration Application from SAExploration Seismic Services (US), LLC, requesting authorization to complete a 2D single seismic test line. We have also received an ADF&G Fish Habitat (FH) Permit application from SAExploration for this activity. We are trying to coordinate a minimum buffer from the anadromous streams (x5) contact points along their line to avoid overpressure effects on fish and potential fish eggs. If we can negotiate at minimum, a 50-foot buffer, a FH Permit may not be needed based on proposed charge size. If they are using motorized vehicles to cross anadromous fish streams, an additional FH permit will be needed from ADF&G.”

SAE Response:

“In response to Mr. Munter’s comments above, we are fully aware of setback requirements and anticipated at a minimum a 50-foot setback from all anadromous streams for our shothole activities. Also, we will not be traveling across streams with any motorized vehicles; there is sufficient road access for all of our movement in and around the line and the streams in the area without stream crossings. Please advise if there any other questions related.”

Division Response:

The Division worked with both ADFG and SAE to determine the best course of action and determined that a 50-foot buffer would be sufficient to address ADFG’s concerns, therefore, no additional permit was necessary.

Appendix C: Public Comment

Included below are comments received in response to the Division's public notice of SAE's application. Also included are SAE's responses to each comment and, finally, the Division's response to all submitted comments.

Comments from April Barnes:

"Opposed to explosive testing in environmentally sensitive area. No testing."

Comments from John Sonin, Douglas:

"Quit the sea-life disturbance! An energy imbalanced capitalistic economy is availing ecological disaster due to valueless energy transfer of monetary representations un-equitable to the complex-atomic-construction's (energy!) they're meant to symbolize. We must do with what we have to correct this ecological engineering anomaly, while we still can! Thank you for the opportunity to comment on the Federal Reserve's Principles for Climate-Related Financial Risk Management for Large Financial Institutions.

I'm grateful that the Fed's Principles recognize that low- to medium-income households and frontline communities will be at the highest risk from the physical and financial impacts of the climate crisis, and I am looking forward to seeing large financial institutions take meaningful action on protecting their customers and communities.

In order to protect our financial stability from the climate crisis, these guidelines need to be requirements, not recommendations. There are not yet any plans in place to ensure that all financial institutions take meaningful steps toward protecting their stability from climate-related risks. These guidelines seem to be for institutions already working on these issues and exclude major banks and corporations who have refused to take action.

These guidelines lack a concrete timeline for banks to follow these guidelines; the science shows that we cannot afford any delays in transitioning to a clean energy economy, and many are already feeling the extreme economic impacts of climate change. I would like to see more specifics on how quickly financial institutions need to implement these changes.

The guidelines need to emphasize the importance of managing transition risk by phasing out funding of fossil fuels and investing in sustainable energy projects, with particular attention to ensuring that new infrastructure and technology is accessible and affordable for all - particularly lower-income, frontline, and BIPOC communities.

I am also concerned that the risk assessment process could cause financial institutions to reduce their investment in the frontline communities hit hardest by the climate crisis. I urge the Federal Reserve to take steps to make sure that these communities are not forgotten, ensuring that climate risk assessments do not lead to divestment from BIPOC communities or any furthering of the inequities of historical redlining by banking and mortgage institutions.

With the ever-present climate crisis, we are facing an unprecedented threat to every aspect of our economy and our very lives. The Federal Reserve needs to take bolder action to fulfill their mandate of protecting the stability of our financial system. The Federal Reserve needs to move

beyond suggestions and recommendations and needs to put firm requirements into place for financial institutions of all sizes with the rapid timelines we need to address the climate crisis.

But until that becomes reality, we must leave unperturbed our organic system...Earth System ... dynamics as static as aesthetically possible.”

Comments from Julie K. Wahl, Alaska:

“I think that knowing what we know now we should be doing environmental impact studies on this sort of testing before permitting. First off Earth doesn't need any more carbon producing exploration. We already have enough to raise the global temperature above limits set for the catastrophic impacts of global warming. 2nd what impacts will this exploration have on the ground water critical to the population that depends on clean usable water. 3rd but equally as important is the effect on the residents of Cook Inlet. We know that the Beluga Whales are endangered. We know that these shocks to their environment are not only disruptive for them but also their food source. Please stop the permitting process for the SAExploration.”

Comments from Michael J. Lettis, Anchor Point:

“We have property a few lots South of where the proposed Whiskey Gulch 2D test line goes over the bluff to the beach. My main concerns over this project are the instability of the bluff in this area and our water well. Along the bluff having a viable water well is very hit and miss. We have a water well with excellent water and water rights from Alaska DNR. I would like assurance that this projected test line would not affect the wells along this stretch of the bluff. I am surprised that more landowners along the bluff beside the 3 or 4 immediately where the test line reached the bluff weren't notified.”

Comments from Molly Kennedy, Anchor Point:

“I am averse to the proposal notice from SAE from the standpoint of the following reason, in April/May. Foremost my main complaint is the nature of this impact at the proposed time of testing. This area is a critical natural habitat located between the mouth of the Anchor River and the Whiskey Gulch (King Salmon) migration area. With diminished King Salmon runs, we must safeguard this area.

You will [be] on Cook Inlet D the area impacted 2012-2014. During the testing [of] the unstable bluff/ was heavy with moisture and snowfall (heavy snow year). In May the bluff sluffed off all vegetation. It may be disputable in court, but I am sure that a steady detonation was a causation effect. It has taken 10 years to get some vegetation back. The sluffed dirt and silt has formed a long sand bar from the mouth of the Anchor River to below my property. The salmon are now running inside the sandbar.

Spring April/May is a critical time for all other shoreline nesting and reproducing creatures. Shorebirds, eagles, herring, silverfish, others, bears, etc.

Another factor concerns Lot 16509001 owned by an out of state owner, that may not be aware of his lot's erosion problems that have damaged his neighbors' properties. The lot has a grey water pipe that releases down the bluff (Ashley has photographs). The lot has an old, buried cistern / that is crushed and ground water leeches in the grey water corridor, it is along SAE's exploratory

path. You will not hear from the owner – but although he has his rights – the effect of these problem(s) are seriously encroaching on neighboring properties.

Please consider these factors when setting up testing dates and area.

Addendum. Please address from 1959 the lands in Lot #5/Lot #2 Laida Creek Slough #84-83.”

Comments from Linda Feiler, Anchor Point:

“How much money will it take to repair the damages oil and gas exploration has caused already. We have destroyed our clam, mussel, and fishing habitats by allowing their constant harassing of our land, sea and air. My house vibrated for 3 months 24/7 while Hilcorp was allowed next door. My well cost \$600 to bring back, my sheetrock cracked, and my neighbors and I could not sleep. Dunleavy would not allow it on his property so why would anyone. Destroy our VERY unstable land and mudslides, erosion, (Remember the costly damage almost taking out the Sterling Highway), and no one is made accountable. I came to the last frontier and it was a Paradise. Government permits have destroyed a huge part of it. Stick a hat pin in your arm and tell the earth that drilling will not hurt it. If we had the brains we are blessed with the Southern third of the U.S. would be forced to use solar and free up billions of gallons for necessary uses.

No, no and no. For the people, for the wild things, for the land. With 20,000 Earthquakes a year hear. No. Who can tell me when he pipes holding 700 toxic chemicals with bring their poison up into our wells, our fish and our waterways!”

Comments from Nancy Hillstrand, Homer:

“I am a local resident and business owner of 50 years on the southern Kenai peninsula. I am sincerely opposed to blasting at the mouth of the Anchor River due to the sensitive nursery area this is for fish, birds, wildlife and the food web that sustains them. This is an especially critical area in the most sensitive life history time frame for so many species and the foods that sustain them in the food web. Weeks ago, to protect chinook salmon, the state ADFG closed set net fishing in Cook Inlet and severely restricted sport personal use and subsistence fishing in Alaska, as far reaching as Chignik, Kodiak as well as the Yukon Kuskokwim. This is not the time to add a cumulative effect to disrupt and blast near a known important wild chinook and trout populations. Please send me maps and information on what detailed studies by species and life stage that proves no harm to intricate food webs and life systems that supports Alaskans resources. 1000s of Alaskan families are affected by chinook salmon fishing closures. To add an additional stressor to this area adds to this death by 1000 cuts cumulative impact to Alaskan living resources. Looking forward to seeing the documentation you have available to prove no cumulative harm. Thank you for your attention.”

Comments from Elizabeth and Roger Watney, Anchor Point:

“First, we appreciate having been contacted for our input regarding permissions for placement of the SAE seismic testing line of seismic charges originally proposed to run through our property (and two adjacent properties) from Cape Ninilchik Avenue in Anchor Point out to Cook Inlet. This line of charges was initially proposed to run down our steep 250-foot-high erosion-prone, sloughing bluff which we have spent over two decades, terracing, vegetating, and attempting to stabilize. Photos of the originally proposed line of charges are included below. In response to our concerns, (communicated by ourselves and our neighbors directly to SAExploration and to the State of Alaska DNR/DOG personnel) SAExploration has changed their plan. As we understand

it, they now plan to use no charges all the way from the Whiskey Gulch¹ drill pad at the east end of Cape Ninilchik Avenue, across the Sterling Highway and out to the inlet, and will have receivers only out from the bluff out into the water. According to DNR/DOG permitting personnel, SAE now plans instead to gather the data by bringing in other equipment that uses vibration only and does not have the damaging concussive impacts.

Grave broader concerns from further exploration and development remain. These include damage to the alarmingly dwindling populations of king salmon which stage for breeding all along here. Also, studies show that populations of capling, a species of fish heavily fed upon by salmon and halibut, breed in the gravel and sands along this beach. Furthermore, this same area is a migratory bird pathway critical to the survival of many of these species. We hope that these potential serious consequences will be given the consideration they need.”

Comments from Tyler Huling, Cook Inletkeeper Policy Director:

I. Introduction: Cook Inletkeeper is a public interest organization dedicated to protecting wild salmon, wetlands, and water quality throughout the Cook Inlet watershed. Please accept these comments on the above referenced matter on behalf of Inletkeeper and its more than 1200 members and supporters throughout southcentral Alaska. The Whiskey Gulch 2D Test Line spans a total of 5.4 miles - 1.2 miles through offshore and tidal zones and 4.2 miles through onshore zones. SAE plans to place nodes approximately 27.5 feet apart onshore, and 55 feet apart in tidal and offshore zones. In the onshore environment, SAE plans to employ a new Clearwave directional explosive product that is .058kg, and to test that product against a 1.1kg conventional explosive. The conventional explosive will be placed at approximately 330 foot intervals along approximately 1.8 of the 4.2 mile onshore zone. The proposed activities will bisect important wildlife habitats, wetlands, and well water sources that are imperative for the health of regional flora and fauna, as well as residents of the area. Potential impacts on salmon populations, endangered marine species, other wildlife, and - most notably - on well water sources, are of concern, and should be investigated thoroughly. Based on the application materials, it is clear that the applicant does not have a deep understanding of the complex and sensitive habitat in which it seeks to operate. As a result, DNR should require more detailed information from the applicant and should enhance oversight to ensure that the applicant operates in a manner that protects the region's vital fish habitat, marine ecosystems, groundwater, and well water sources - which are imperative for the health of the area's human population. Impairing well water quality may have profound and deleterious impacts on human health and could negatively impact property values. These externalities should not be taken lightly.

II. Comments:

A. Potential Impacts On Water Quality And Proximity to Residential Water Wells: In the onshore portion of the Whiskey Gulch 2D Test Line, SAE plans to employ technology that it refers to as ‘Clearwave directional explosive product.’ In its application materials, SAE offers no information regarding how groundwater or well water sources may be impacted by the use of Clearwave directional explosive products. The proposed shot line will bisect the well water sources of many residences in the area. Impacts on those well water sources must be investigated and understood prior to final project approval and/or the use of any explosive products. In its permit application, SAE notes that Clearwave directional explosive products will be used

approximately every 55 feet along the onshore portion of the Test Line. Traditional explosive devices are deployed approximately every 330 feet. SAE does not address what the difference in spacing may mean in terms of environmental impacts, or in terms of impact on water wells. Without directly addressing what this new spacing regimen will mean for well water quality - and providing verifiable data to substantiate those claims - it is not reasonable to expect interested stakeholders or property owners to be able to accurately assess the Whiskey Gulch 2D Test Line project. Cook Inletkeeper is concerned about negative impacts on groundwater and well water quality as a result of the use of Clearwave directional explosive products. Many, if not most, private properties and residences in the area rely on well water as a main water source. To not address potential impacts on residential well water quality in the application materials is a flagrant oversight on behalf of SAE and should prompt DNR to require more detailed information from the applicant, enhanced oversight, as well as water quality testing and monitoring protocols to ensure that both human health and property values are protected.

B. Environmental Impacts: In its application materials, SAE claims that the use of Clearwave directional explosive products will result in ‘reduced environmental impacts’ but provides no explanation or data to support their claim, and no examples of potential reductions in environmental impacts. Without such examples or data, it is not reasonable to expect the public, potentially impacted landowners, concerned citizens, or relevant stakeholders to be able to draw sound conclusions regarding any potential hazards posed by the Whiskey Gulch 2D Test Line project. DNR should request that SAE resolve the above mentioned concerns by directly addressing what ‘reduced environmental impacts’ can be expected, and require that they substantiate those claims with verifiable data.

C. Incomplete Application: Miscellaneous Land Use Permits (MLUP) are required to “minimize adverse effects” on State lands and submerged lands pursuant to 11 AAC 96.005. According to DNR’s MLUP Guidance Document, “[t]he application must contain the following information in sufficient detail to allow evaluation of the planned activities’ effect on the land,” including: ‘Other Considerations: Any other consideration(s) related to surface lands in the project area including native allotments or private lands.’ We assert that the well water quality concerns of private residences fall within the purview of ‘private lands,’ given the potential for reduced property values as well as impacts on the health of property owners, and must be addressed by SAE and DNR in order to meet the requirements of MLUP’s outlined by DNR. Connectivity between well water sources and surface water features, and between private property and adjacent State land, is implicit and should be accounted for in the permit application. It is incumbent upon SAE to demonstrate prior to final permit approval that well water sources of nearby and adjacent private property will not be impaired by the Whiskey Gulch 2D Test Line. The applicant failed to provide this information and as a result, it failed to meet the dual goals of the MLUP, to ‘provide sufficient detailed information of the project area and proposed activities for the Division to determine the planned activities’ effect on State lands.’ As well as to ‘present the information in a format that is clear and understandable to other reviewers and the public.’ Without such basic information about environmental impacts within the proposed project area, DNR cannot understand adverse effects on State lands or adjacent private lands, nor can other reviewers or the general public. As a result, the applicant should be required to submit a modified MLUP pursuant to DNR guidance to provide the information necessary for an adequate review.

D. Sensitive Marine Habitat And Impacts On Aquatic Life: Given that 1.2 miles of the Whiskey Gulch 2D Test Line is planned for offshore and tidal environments, it is notable that the permit application materials contain no mention of impacts on sensitive marine habitats or on aquatic life. The Cook Inlet beluga whale population is listed as an endangered species under the Endangered Species Act, and may be impacted - either directly or indirectly - by underwater explosive testing and exploratory activities. In order for residents of the area and relevant stakeholders to accurately evaluate the permit for the Whiskey Gulch 2D Test Line, the impacts on sensitive marine environments and associated species must be addressed. DNR should request that SAE address potential impacts on endangered species populations and/or on their food sources.

E. Wetlands And Other Onshore Habitat Concerns: The 4.2 miles of onshore test line crosses wetlands that are important habitat for a variety of migratory bird species, local bear and moose populations, and other forms of wildlife that are not only crucial for the ecological health of the region, but for subsistence lifeways, the tourism industry, and to the indigenous cultures of the region. SAE does not address any of the above mentioned topics in their permit application. In order to accurately assess the project and any potential impacts, it is incumbent upon DNR to request that SAE specifically comment on how wetlands may be impacted by the use of Clearwave directional explosive products.

F. Need for Better Permitting Tools And Assessment Accessibility: It is important to note that impacted or concerned citizens, DNR staff and other agency personnel, in addition to relevant stakeholders, cannot adequately review permit application materials without the implementation of sufficient mapping and imaging technologies such as GIS. Employing information technologies and visual aids such as GIS would allow permit reviewers to plot proposed activities against various layers of important data. These tools are cost-effective and will significantly enhance the speed and quality of permit reviews, in line with Administrative Order 266.

III. Conclusion: Cook Inletkeeper understands the importance of economic development and of ensuring we can meet our energy needs, but we have concerns about potentially harmful and lasting impacts from the proposed Whiskey Gulch 2D Test Line project on the water sources that our community depends on. We must ensure that well water quality won't be negatively impacted by the proposed exploratory project prior to moving forward. It is not possible for residents of the area, interested parties, or relevant stakeholders to make informed decisions about such an important project without providing them with clear and data-driven information regarding how the use of Clearwave directional explosive products may impact local water wells. Therefore, SAE's application does not meet DNR standards for MLUP's and should be revised to address the concerns outlined in this document. Thank you for the opportunity to comment. Please feel free to contact me at (907) 231-5173 or tyler@inletkeeper.org with any questions.

SAE Response to All Public Comments:

SAE would like to test another source technique on the Whiskey Gulch 2D test line. With some of the concerning comments relating to the explosive charges in and around the bluff area or near wells, SAE would like to propose use of a Uni Vibrator vehicle on rubber tires that will generate a frequency between 5-96Hz during a single "sweep" from 16-24 seconds at each source point (approximately 55 feet apart). SAE will only use the single vibrator on local roads and right of ways where there is already a pre travelled path by vehicles. We will observe all industry recommended setbacks from any

structures, wells, and other as defined in the Exploration Directive from Alberta's Mines and Minerals Act. SAE will have a peak particle velocity monitor on crew to determine that we meet the distance threshold guidelines recommended in the Exploration Directive. The hold down weight for the UniVibe is 13,000, typically half the weight of the vehicle which falls under Source Type category A in determining setback distances.

Division Response to All Public Comments:

The Division appreciates all the comments from the public and worked with SAE to address concerns as they relate to the use of state land. It is important to note that the Division's authority, as described in 11 AAC 96, is limited to land use activities on state land. As stated in the Decision, this permit does not approve entry on private land and does not constitute the approval required for surface entry on non-state land without an agreement with the surface owner.

The comments that were relevant to the specific activities being proposed and the Division's authorities were focused on two main concerns. The first concern was bluff stability, and the second was water well impacts.

To address the bluff stability concerns, the project has limited the placement of source charges to the east side of the Sterling Highway only. Receiver nodes will still be placed west of the Sterling Highway. Receiver nodes collect data and do not cause any ground disturbance. This permit does not approve the use of Clearwave charge, OSX charges, or any other explosives on state land. A Uni Vibrator vehicle has been added to the source type list for the project to alleviate the number of Clearwave charges near bluff areas. It will be utilized on existing roads and rights-of-way.

To address water well impact concerns, industry standards as set out in the Exploration Directive will be utilized for the entirety of the project. Each source type has setback distance requirements determined by the structure category and source type. Setback distances for both active and inactive water wells will be as follows:

| Source Type | Setback Distance (m) | Setback Distance with Consent of Owner (m) |
|----------------------|-----------------------------|---|
| Clearwave Charge | 180 | 16 |
| OSX Charge | 180 | 55 |
| Uni Vibrator Vehicle | 50 | 16 |

The Division believes that the proposed changes to the project, along with the permit stipulations included in Appendix D, will allow SAE to conduct their project in a manner that minimally impacts the residents and the environment.

To view the full version of the Exploration Directive from Alberta's Mines and Minerals Act please see link below:

[Exploration Directive \(alberta.ca\)](https://www.alberta.ca/exploration-directive)

APPENDIX D: STIPULATIONS
MISCELLANEOUS LAND USE PERMIT FOR GEOPHYSICAL EXPLORATION

Geophysical and seismic activities are subject to the following permit stipulations:

Standard Stipulations:

1. The permittee shall defend, indemnify and hold the State of Alaska harmless from and against any and all claims, damages, suits, losses, liabilities and expenses for injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of State lands authorized under this permit by the permittee, its contractors, subcontractors and their employees.
2. A copy of the permit and stipulations must be posted in a prominent location where other permits and safety information are displayed for crew members. The permittee shall make available a copy of the application, all subsequent modifications, and a copy of this permit and all its attachments to any interested party upon request in a reasonable time.
3. The permittee shall notify and obtain a modification from the Division in advance of any activities that deviate from the approved permit. Any action taken by the permittee or his agent that increases the overall scope of the project or that negates, alters, or minimizes the implied intent of any stipulation contained in this permit will be considered a deviation from the approved permit.
4. The issuance of this permit does not alleviate the obligation of the permittee to obtain authorizations required by other agencies for this activity.
5. The permittee shall inform and ensure compliance with all conditions of this permit by its employees, agents and contractors, including subcontractors at any level.
6. **Reservation of Rights:** The Division reserves the right to grant additional authorizations to third parties for compatible uses on or adjacent to the land under this permit. Authorized concurrent users of state land, their agents, employees, contractors, subcontractors, and licensees, shall not interfere with the operation or maintenance activities of each user.
7. **Valid Existing Rights:** This permit is subject to all valid existing rights and to the land. The State of Alaska makes no representations or warranties whatsoever, either expressed or implied, as to the existence, number, or nature of such valid existing rights.
8. The Commissioner of the DNR may require that an authorized state representative be present during any activities described in or conducted under this permit.
9. The permittee shall consult the Alaska Heritage Resources Survey (907-269-8721) so that known historic, archeological and paleontological sites may be avoided. Should any sites be discovered during the course of field operations, activities that may damage the site will cease and the Office of History and Archaeology in the Division of Parks and Outdoor Recreation (907-269-8721) shall be notified immediately.

10. The permittee shall make available to the Division, upon request, all records relating to the permit activities and landowner approvals.
11. The permittee shall observe and apply applicable setbacks as defined by 18 AAC 80.020, 18 AAC 72 and/or the International Association of Geophysical Contractors Setback Guidelines to activities approved under this authorization. Alternative setback distances may be employed to protect coastal uses and resources, water wells, structures, private property including livestock, and other resources if it is determined that a particular guideline is insufficient.
12. Trails, campsites and work areas must be kept clean. Trash, survey lath, markers, and other debris that accumulates in camps, along seismic lines, and travel routes that are not recovered during the initial cleanup, shall be picked up and properly disposed of within one calendar year.
13. The Director has the right at any time to modify or revoke this permit.
14. All wastewater must be disposed of in a manner acceptable to ADEC and must meet Alaska Water Quality Standards found at: <http://dec.alaska.gov/water/wqsar/wqs/>.
15. ADEC Drinking Water regulations 18 AAC 80 apply to public water systems.

Land and Access Stipulations:

1. The permit authorizes the permittee to conduct geophysical/seismic exploration activity upon lands owned by the State of Alaska. No person may engage in mineral exploratory activity on land, the surface of which has been granted or leased by the State of Alaska, or on land for which the state has received the reserved interest of the United States.
2. This permit does not authorize activity on Mental Health Trust lands, School Trust lands, Park lands, or lands of the University of Alaska.
3. Approval of this permit does not constitute the approval required for surface entry on non-state land without an agreement with the surface owner. This permit does not approve entry on private land.
4. The seismic exploration activities granted under this permit must not diminish the use and enjoyment of lands encompassed within a Native Allotment. Before entering a pending or approved Native Allotment, the permittee shall contact the Bureau of Indian Affairs and Bureau of Land Management and comply with applicable federal law.

Public Safety and Program Outreach Stipulations:

1. Public safety: Appropriate signage will be deployed on all access routes and roadways in the project area. The Department of Transportation and Public Facilities or right-of-way lessee may advise the permittee on measures to maintain safe conditions where appropriate. The permittee must watch for, provide verbal warning to, and document people or vehicles entering potentially dangerous areas of the project. Lighting and marking of some project

areas with lath or fluorescent tape is advised for activities that occur during periods of sustained darkness or where conditions are unsafe for humans or animals.

2. Notices: To avoid unintended conflicts with other users, the permittee shall post a notice of this project at conspicuous locations including key travel intersection crossings, areas of public use and in a prominent location in any operators or contractors staging area or camp. The notice shall include the Division's contact number (907-269-8800), project title and permit number, names and contact telephone numbers of the permittee and all operators. The permittee shall provide notices on behalf of the Division to all upland owners involving shoreland, tideland, or submerged land adjacent to the upland owner's property if no notice or agreement is made with the owner by the permittee as required under 11 AAC 96.030(c). All forms of public outreach must be documented and reported to the Division as they occur.
3. In areas of subsistence and personal use harvesting, the permittee will coordinate survey activity with local users to prevent unnecessary conflicts. The permittee shall make a good faith attempt to coordinate survey activities with the owners of known trap lines. Existing snowmachine, dogsled, or other trails, should be marked with survey lath where they intersect receiver and source lines. The permittee is required to post notice of potentially dangerous or hazardous project activities at these locations.

Wildlife Stipulations:

1. All activities shall be conducted in a manner to minimize or avoid disturbance to wildlife and their habitat. Hazing of wildlife is prohibited unless a Health Safety and Environment concern is present.
2. Activities must avoid occupied grizzly bear dens and black bear dens by one-half mile unless alternative mitigation measures to minimize disturbance are authorized by the Division after consultation with ADFG. Known den locations shall be obtained from the nearest ADFG Division of Wildlife Conservation office prior to starting operations. Occupied dens encountered in the field must be reported to the above, and subsequently avoided.
3. The permittee shall abide by the provisions of Alaska's wildlife feeding regulation, 5 AAC 92.230.
4. Activities within State-designated special areas (AS 16.20.010- .162, .500-.690) will be conducted in a manner consistent with the area's statutes regulations and management plan.

Cook Inlet Stipulations:

1. On-site refuse disposal is prohibited. The permittee will remove and dispose of all waste generated during operation and termination activities under this authorization to an off-site ADEC approved disposal facility. Waste, in this stipulation, means all discarded matter, including but not limited to human waste, trash, garbage, refuse, oil drums, petroleum products, ash and discarded equipment. Unattended vehicles and equipment will not be parked or left on the traveled surface of existing off- line trails or access routes.
2. Snow ramps or snow bridges may be used as appropriate to provide access across overflows so as to preclude cutting, erosion or degradation to any watercourse. Ice or snow bridges and

approach ramps constructed at stream, river or slough crossings shall not contain extraneous material (i.e., soil, rock, brush, or vegetation). Ice or snow bridges shall be removed immediately after use or prior to breakup or breached to facilitate water flow during breakup.

3. Existing roads, trails, and natural clearings must be used wherever possible. Trail widths and clearing shall be kept to a minimum. Trail surfaces may be cleared of brush, stumps, and snags. Site disturbance shall be kept to a minimum to protect local habitats. All activities at the site shall be conducted in a manner that will minimize the disturbance of soil and vegetation and changes in the character of natural drainage systems. Additionally, any ground disturbance that may have occurred shall be restored to its original condition contoured to blend with the natural topography to protect human and wildlife health and safety. Particular attention must be paid to prevent pollution and siltation of streams, lakes, ponds, waterholes seeps and marshes, and disturbances to wetlands.
4. Track vehicles shall operate within areas of adequate snow cover and frost to mitigate any damage and prevent breaking through the vegetative mat.

Project Specific Stipulations:

1. SAE will provide timely notification to the Division of any adjustments to the project schedule to allow for the coordination of a site visit by Division representatives.
2. SAE will follow the required setback distances as described in the Exploration Directive from Alberta's Mines and Minerals Act.

Reporting Stipulations:

1. **Geophysical Data Submission Requirement Form:** As a stipulation of the issuance of this MLUP for geophysical exploration, the permittee acknowledges the requirements of 11 AAC 96.210 (1) and agrees to notify the Director of the Division of the availability of processed seismic exploration data within 30 days of completion of initial processing and submit seismic exploration data. The Geophysical Data Submission Requirements can be found on the Division's website: <http://dog.dnr.alaska.gov/Services/Applications>. Your signature acknowledges your obligation to fulfill the data submittal requirements. This report shall be submitted to dog.permitting@alaska.gov before each survey commences.
2. **Activity Completion Report:** Upon expiration of the MLUP or completion of all activities authorized under the MLUP, whichever occurs first, an Activity Completion Report must be submitted summarizing activities, equipment trails, camps and staging areas, damages to State lands and surface impacts, lost equipment, fires, and unintended explosions, spills, land-use conflicts and work completed. The report shall include a map depicting all mulched trails. Rehabilitation, if required, shall be completed to the satisfaction of the DNR. This report shall be submitted to dog.permitting@alaska.gov.

If no activities are completed under the MLUP, then an Activity Completion Report must be submitted on or before the expiration of the MLUP stating that no activities occurred.

3. **Geophysical Activity Completion Report Form:** The permittee must complete and return a Geophysical Activity Completion Report form for each survey acquired. Please submit a

separate form for each sub-program data submittal. A non-confidential public completion report will be placed into the MLUP permit file each time a sub-program is completed. Geophysical Activity Completion reports must be submitted to the Division's Resource Evaluation Section within 30 days of completion of all activities. For in-depth instructions on how to complete the form, please refer to the Division's website: <http://dog.dnr.alaska.gov/Services/Applications>. This report shall be submitted to dog.seismicdata@alaska.gov. If no activities are completed under the MLUP, a Geophysical Activity Completion Report must be submitted on or before the expiration of the MLUP (be sure to check box 27 to indicate the survey was cancelled).

4. **Geophysical Processing Completion Report Form:** The permittee must complete and return a Geophysical Processing Completion Report form for each survey acquired. Please submit a separate form for each sub-program data submittal. A confidential processing completion report will be submitted each time a sub-program is completed. The processing completion reports must be submitted to the Division's Resource Evaluation Section within 30 days of completion of initial processing. For in-depth instructions on how to complete the form, please refer to the Division's website: <http://dog.dnr.alaska.gov/Services/Applications>. This report shall be submitted to dog.seismicdata@alaska.gov.
5. **In-field Operations Notice:** During activities conducted under the MLUP, the permittee must submit weekly reports summarizing activities undertaken and their location within the permit area. These reports shall be submitted to dog.permitting@alaska.gov.
6. **Spill Notifications:** The permittee shall comply with the ADEC requirements for reporting the unauthorized discharge, leak, or spill of hydrocarbons or toxic or hazardous substances. The permittee shall notify the Department of Natural Resources of all spills that must be reported under 18 AAC 75.300 under timelines established therein. All unintentional fires and explosions must be reported to DNR immediately. The DNR 24-hour spill number is (907) 451-2678; the fax number is (907) 451-2751, DOG must be notified at dog.permitting@alaska.gov. DNR and ADEC shall be supplied with all follow-up incident reports.
7. Blowouts, defined as the detonation of source points that cause surface damage, are reportable if the surface damage encompasses more than 36 inches. The report must include the location (lat./long. in WGS 84) and pictures of the blowout. All blowouts will need to be reclaimed or rehabilitated to the satisfaction of the DNR.
8. A summary record of all surface impacts, lost equipment, spills, fires, and unintended explosions shall be included in the Permitting Section's completion report. Rehabilitation, if required, shall be completed to the satisfaction of the DNR.
9. All fires and explosions that require a response to protect life and property must be reported to DNR and ADEC immediately and shall be supplied with all follow-up incident reports.
10. The Division's Permitting Section shall be notified in Anchorage by telephone at 907-269-8800 and by email at dog.permitting@alaska.gov if, during the conduct of activities, state resources are damaged, or a conflict occurs.

11. The permittee shall make available a copy of the seismic application, all subsequent modifications, and a copy of this permit and all its attachments to any interested party upon request in a reasonable time.

I acknowledge, and agree to these Permit terms, conditions, and stipulations.

Authorized Representative Signature

Date

Authorized Representative Printed Name